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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/462,472	01/14/2000	HIROSHI MATSUI	0010-1075-0-	5130

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EXAMINER

FRONDA, CHRISTIAN L

ART UNIT PAPER NUMBER

1652

DATE MAILED: 10/21/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/462,472

Applicant(s)

MATSUI ET AL.

Examiner

Christian L Fronda

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22,25 and 27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 13-22 and 25 is/are rejected.
- 7) ☒ Claim(s) 27 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

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DETAILED ACTION

1. Claims 13-22, 25, and 27 under consideration in this Office Action.

Claim Objections

2. Claims 13-22 and 25 are objected to because of they recite non-elected subject matter. Applicants are required to cancel or amend the claims to recite the elected subject matter of phosphoglucose isomerase.

Applicants' arguments filed 8/6/2003 (Paper No. 21) in which Applicants assert that all members of a Markush group must be examined have been fully considered but they are not persuasive since each of the enzymes recited have different functions, substrates, and structures. Thus, the enzymes require separate searches that have different limits, boundaries, scope, and subject matter.

Claim Rejections - 35 U.S.C. § 112, 2nd Paragraph

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 14-22 and 25 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicants' arguments filed 8/6/2003 (Paper No. 21) in which Applicants assert that there is no basis for the rejection have been fully considered but they are not persuasive for the reasons of record and the reasons stated below.

Claim 14 is dependent on claim 13 which is directed toward the producing purines by using a microorganism in which an enzyme is inhibited selected from the group consisting of succinyl-adenosine monophosphate synthase, purine nucleoside phosphorylase, adenosine deaminase, inosine-guanosine kinase, guanosine monophosphate reductase, 6-phosphogluconate dehydrase, phosphoglucose isomerase, adenine deaminase, and xanthosine phosphorylase. Claim 13 does not recite any kind of increase in expression of a gene encoding phosphoribosyl pyrophosphate amidotransferase or phosphoribosyl pyrophosphate synthase is increased. Thus,

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There is insufficient antecedent basis for this limitation in the claim. Claims 17 and 20 which depend from claim 14 are also rejected because they do not correct the defect of claim 14.

Amending claim 13 to recite that the claimed recombinant microorganism **comprises** an inhibition of the reaction of the recited enzymes and amending claim 14 to recite that the method **further comprises** the recited increase in expression of the recited genes may overcome this rejection.

Claim 15 rejected for lack of antecedent basis for the same type of argument as stated above and may be overcome by the amendment above. Claim 15 recites the limitation that control of phosphoribosyl pyrophosphate amidotransferase or a phosphoribosyl pyrophosphate synthase is deregulated. There is insufficient antecedent basis for this limitation in the claim. Claims 18, 21, and 22 which depend from claim 15 are also rejected because they do not correct the defect of claim 15.

In claim 16, the phrase "control of the enzyme involved in the purine nucleoside biosynthesis is desensitized by desensitization of feedback inhibition" renders the claim vague and indefinite because the specific enzyme which is desensitized by desensitization of feedback inhibition is not known and recited in the claim. Furthermore, there is insufficient antecedent basis for this limitation in the claim. Claim 19 which depends from claim 16 is also rejected because the claim does not correct the defect of claim 16.

In claim 22, the phrase "control of the enzyme involved in the purine nucleoside biosynthesis is derepressed by inactivation of a purine repressor encoded by *purR*" renders the claim vague and indefinite because the specific enzyme which is derepressed is not known and recited in the claim. Furthermore, there is insufficient antecedent basis for this limitation in the claim.

Claim 25 recites the limitation that purine nucleoside incorporation is inhibited by blockage of a reaction catalyzed by nucleoside permease. There is insufficient antecedent basis for this limitation in the claim.

Conclusion

5. No claim is allowed.
6. Claim 27 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims
7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time


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policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian L. Fronda whose telephone number is (703)305-1252. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapura Achutamurthy, can be reached at (703)308-3804. The fax phone number for this Group is (703)308-0294. Any inquiry of a general nature or relating to the status of this application should be directed to the Group 1600 receptionist whose telephone number is (703)308-0196.

CLF


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